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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/750,480	12/28/2000	Mitchell R. Swartz		7970
7590	01/11/2005		EXAMINER	
Mitchell R. Swartz, ScD, EE, MD 16 Pembroke Road Weston, MA 02493			PALABRICA, RICARDO J	
			ART UNIT	PAPER NUMBER
			3641	

DATE MAILED: 01/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/750,480	SWARTZ, MITCHELL R.	
	Examiner Rick Palabrica	Art Unit 3641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 28 November 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-20 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

DETAILED ACTION

1. Consistent with the 12/07/04 Decision by the Director, Patent Technology Center 3600, on Applicant's 2/3/04 Petition on the instant application, the Examiner withdraws the 1/13/04 Final Office Action and replaces it with this Final Office Action. Specifically, the rejection under 35 U.S.C. 112, 1st paragraph with respect to new matter and the rejections under 35 U.S.C. 102 and 103 based on the prior art cited in the 1/13/04 Final Office Action are withdrawn.

Notwithstanding said withdrawals, claims in the instant application still do not define over the other prior art cited in the 7/9/03 Non-Final Office Action, as discussed in section below.

On rejections under 35 U.S.C. 101 and 35 U.S.C. 112, 1st and 2nd paragraphs rejections that are not related to new matter, the Director upheld the responsiveness of the Examiner's response in the 1/13/04 Final Office Action to Applicant's arguments. These responses and rejections are included in this Office Action for ease of understanding and for completeness of record on this application.

2. Applicant's 11/28/03 amendment, which revises claim 14 and traverses the claim rejections, is acknowledged. This amendment is in response to the 07/09/03 Non-Final Office Action. Applicant's arguments traversing the rejections have been fully considered but they are not persuasive because they can be best characterized, for example, as follows:

- Irrelevant (e.g., alleging that new matter in the disclosure is the result of the election requirement of the Examiner of parent application).
- Improper interpretation (e.g., alleging that hydrogen loading is not new matter because it is a subject discussed extensively in cited literature)
- Recycling of old arguments that have no merit (e.g., Examiner could not have found prior art if the invention was indefinite)
- Recycling of arguments previously rejected in denied petitions (e.g., Examiner is forcing Applicant into double patenting)
- Inconsistency with factual information (e.g., changes in the specification respond to and fully comply with Federal Appellate Decision 00-1107)
- Improper definition of terms (e.g., applicant appears to define "skilled-in the art" as declarants, affiants and Amicus Curiae who agree with him but excludes those with contrary opinion)
- Reliance on features not recited in rejected claims (e.g., additional electric field and orthogonal magnetic field)
- Failure to establish relevance of documents to current application (e.g., Mallove declaration)
- Unprofessional derogatory comments on legitimate, technical issues raised by the examiner (e.g., "Examiner appears not to be familiar with calculus", "Examiner is referred to any elementary calculus book so he may understand what is well known to any qualified engineer, and any scientist well-trained", etc.).

The applicant has been warned by the Director, TC3600, regarding the conduct

of business with the Office, as outlined in 37 CFR 1.3, which states, "Applicants and their attorneys or agents are required to conduct their business with the Patent and Trademark Office with decorum and courtesy" (see 5/1/02 Decision on Petition under 37 CFR 1.181 on Applicant's S/N 09/750,480).

The Examiner puts the applicant on notice, as part of the record of this application, that the above statements are a violation of 37 CFR 1.3.

3. Applicant traversed the rejection of claims under 35 U.S.C. 112, first paragraph, applicant on the grounds that: a) the claims are directly from the original specification (i.e. parent), and the scope and wording of the claims maintain the wording and scope of the original disclosure and claims; and b) the claims comply with the Federal Decision 00-1107 in the parent of the instant application. The Examiner disagrees because in its decision in 00-1107, the Board affirmed the rejection of the claims in the parent application for lack of enablement and utility. The Board concluded that the applicant "had not provided an enabling specification such that one of ordinary skill in the art could conduct the claimed cold fusion process without undue experimentation." (see page 14 of 00-1107).

4. Applicant also traversed the Examiner's statement that he has presented neither a working example nor description of an operating embodiment nor specific direction or guidance as to how to achieve the claimed results.

Applicant cites the specification of the parent case, S/N 07/371,937, as proof that he has an operating embodiment. To the contrary, the Board in Federal Decision 00-1107 clearly stated that there is "complete absence of working examples in Swartz's specification" (see page 14 of 00-1107).

Applicant cites declarations that allegedly demonstrate proof of operability and enablement. The submitted declarations have been fully considered but found unconvincing because of one or more of the following reasons:

- a) They appear mainly directed to opinions and conclusions unsupported by facts (e.g., Ahern, Kurzweil, Miles, Rotegard and Storms). See *In re Pike et al.*, 84 USPQ 235. No weight is given to an opinion declaration on the ultimate legal conclusion in issue. See *In re Lindell*, 155 USPQ 251.
- b) They are not relevant to the technical subject of the application, e.g., Verner, Fox, Bass that pertain more to complaints about the Patent Office, and Chubb, Ahern, Mallove and Fox that pertain to loading and not to excess heat generation in the claimed invention.
- c) They were submitted in support of a different application, have been previously considered on appeal, and applicant's petition denied (e.g., Mallove, Verner, and Strauss). Additionally, the applicant did not establish the relevance of these declarations to the current application.
- d) They deal with issues in the cold fusion area that have since been either discredited, abandoned, found defective or else overtaken by events (e.g., Mallove on the Japanese cold fusion research).

e) They do not appear to have been declarations of disinterested parties (e.g., Swartz, Rotegard).

As to the ICCF-10 press releases cited by the Applicant, he has not established any identical relationship between the apparatus described therein and his claimed invention.

5. As to the issue of indefiniteness of the claims, applicant again alleges that the federal court [In re Swartz 00-1107] had no trouble understanding the invention in the parent application. To the contrary, the Board affirmed the rejection for indefiniteness of the claims, and even observed that the applicant "throughout his appeal, had failed to make specific and substantial arguments against the rejection (see page 13 of 00-1107).

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to

which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The applicant states on page 4 of the specification that the process of loading is complicated, and the changes of deuterium loading into palladium is difficult because "the rate of desired reactions is very low." However, the applicant presents neither working examples nor description of an operating embodiment nor specific direction or guidance as to how to achieve the claimed results. Thus, although the applicant acknowledges that the process is complicated and difficult to monitor, he treats the process as though it is well known and readily reproducible. This paucity of information necessary for the exercise of the claimed invention is discussed in detail below.

On page 7, 1st paragraph, the applicant states that a mechanical system enables the cathode to vibrate between displacements. There is neither a written description nor enabling disclosure of this mechanical system.

(Applicant's arguments in his traverse have been fully considered but found unconvincing. As presently set forth, the electrical power system (box 50 in Fig. 1), the optical irradiator subsystem (box 30 in Fig. 1), the optical detection subsystem (box 31 in Fig. 1), the central control unit (box 23 in Fig. 1) and the power source (box 42 in Fig. 1) are essentially "black boxes" with no description of the internals thereof. Applicant has not shown where the specifics of the internals of the "black boxes" are described in the cited publications).

On page 8, 2nd paragraph, the applicant discloses the reaction cell in Fig. 2. The disclosure is insufficient as to conditions existing inside the cell (e.g., pressure and

temperature conditions). The disclosure is also insufficient as to how and in what manner these conditions are maintained, e.g., how the temperature is maintained at a given range. The disclosure is also insufficient as to ratio of the different masses involved, i.e., ratio of the thickness of "springy material" 13 to the thickness of cathode 1, ratio of mass 11 to the mass of cathode 1, ratio of three masses to each other, etc.

(Applicant's reply is unresponsive. The above remark refers to lack of disclosure of parameters for an operating embodiment, which embodiment has not been proven to exist by the applicant).

On page 10, line 5 of the specification, the applicant provides an unnumbered equation of motion. The disclosure is insufficient as to how and in what manner the values of the constants, k and b, are evaluated, and what approximations, if any, are used in their evaluation.

(Applicant's reply is unresponsive. The Examiner was not referring to how to theoretically solve the equation, but how to determine the constants in an actual operative embodiment that the applicant has not proven to exist).

There is neither an adequate description nor enabling disclosure of the parameters of a specific operative embodiment of the invention, including the exact composition of the electrolyte (including impurities and amounts thereof), atomic or weight ratio of metal electrodes to electrolyte, dimensional ratio of electrodes to their spacing (i.e., sizes of anode and cathode relative to the space between them), surface area-to-volume requirement for the reactor, ratio of masses 1, 11 and 13 to each other, thickness ratio of the "springy material" 13 to cathode 1, required magnetic strength of

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coil 41, distance between the coil and the cell, length of time the process has to carried out, pressure and temperature conditions inside the reaction cell and how these conditions are maintained within a given range, mechanical means to support the cathode at a pivot point, etc.

(Applicants arguments in his traverse have been fully considered but found unconvincing. Applicant has not incorporated by reference the applications that allegedly contain the above subject matter).

Claim 1 recites a "process for producing a product using a material which is electrically loaded with a second material. The disclosure is insufficient as what exactly is this so-called "product."

7. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 8 and 17 recite the limitation, "mechanically coupling said material." The claims are vague, indefinite and incomplete as to what the material is coupled to.

Claims 1 and 10 recite the limitation, "providing means to follow the frequency of said vibration." The claims are vague and indefinite as to what is meant by the term, "to follow."

(Applicant alleges that the Examiner of the parent application understood the invention and therefore there is no indefiniteness. The current Examiner disagrees. Each patent application (and its accompanying claims) is treated on their own merits. See particularly MPEP 811.04, which states:

"Even though inventions are grouped together in a requirement in a parent application, restriction or election among the inventions may be required in the divisional applications, if proper.")

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claims 1-20 are rejected under 35 U.S.C. 101 because the claimed invention as disclosed is inoperative and therefore lacks utility.

The reasons that the inventions as disclosed is inoperative are the same as the reasons set forth in sections 7 and 8 above and the reasons set forth in said sections are accordingly incorporated herein.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 4 and 7 are rejected under 35 U.S.C. 103(a) as being obvious over Takumoto et al. (U.S. 4,016,052).

Takumoto et al. disclose a continuous electrodeposition process using a vibrating cathode in an electrolyte. They disclose an embodiment of a cathode of stainless steel and an electrolyte comprising magnesium chloride, calcium chloride and sodium chloride.

Takumoto et al. do not limit the material of their cathode to any specific type of stainless steel. Therefore, austenitic stainless steel such as type 301, which contains nickel, is an acceptable material. Nickel is a well-known material that absorbs (i.e., "load") hydrogen isotopes.

Either one of magnesium chloride, calcium chloride or sodium chloride has hygroscopic properties, i.e., any one of them can absorb water from the surrounding atmosphere of the Takumoto et al. apparatus. Water is also well known to contain a small percentage of deuterium. The claims do not specify the amount of loading, and loading the cathode with even a single atom of a deuterium, as in Takumoto et al., reads on the claims. (Examiner's note: In his traverse of Takumoto et al., Applicant himself admits that there is some water absorption in the electrolyte of Takumoto, by this statement, "no significant amount of water will be absorbed." See page 32. It is not necessary to have significant water absorption to provide the as-claimed loading of deuterium.)

Takumoto et al. disclose that it is preferable to rotate or vibrate the cathode, either at a constant rate or by periodically varying the rate of rotation or vibration of the cathode. For example, they disclose a rotation of the cathode electrode at 2000 rpm (see column 13, last two lines). They also disclose the cathode electrode being vibrated

with a period of 400 cycles per min (see column 18, lines 30+). Note that rotation of the cathode inherently also results in its vibration.

Applicant's claim language reads on Takumoto et al.'s method and apparatus as follows: a) "second material" reads on the deuterium contained in the water inherently present in the electrolyte because of the hygroscopic property of certain salts in the electrolyte; b) "mechanical coupling and means to drive the vibration" reads on the expedient used by Takumoto et al. to produce the vibration of the cathode; c) "means to follow the frequency of vibration" reads on the expedient used by Takumoto et al. to set (or "to follow") the rotation or vibration rate such as those given above.

Applicant traversed Takumoto et al. on the grounds that their apparatus has different features from the Applicant's device. For example, Applicant alleges that Takumoto et al. do not show an optical interrogating beam, optical irradiator system, optical detection subsystem, optical lenses, beam splitters, "springy" material, reaction chamber, additional electric field, and orthogonal magnetic field intensity. The above-cited features upon which the applicant relies are not recited in rejected claims(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Additionally, if said unrecited features are considered by the applicant to be critical to his invention, then such omission would amount to a gap between the essential elements. In this case, the claim(s) would be incomplete and would be rejected under 35 U.S.C. 112, second paragraph. See MPEP § 2172.01.

As to Applicant's arguments regarding absence of loading in Takumoto et al. again this is not convincing because of the discussion in the first part of this section 10.

10. Claims 8-10, 12, 17, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takumoto et al. in view of either one of Rudd (4,554,836) or Sugimoto (U.S. 4,768,381). Takumoto et al. disclose the applicant's claims except for the laser measurement of the vibration frequency of the cathode.

Either one of Rudd or Sugimoto a laser vibrometer for remotely measuring the vibration frequency of an object.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus, as disclosed by Takumoto et al., by the teaching of any one of Either one of Rudd or Sugimoto to include a laser vibrometer to gain the advantages thereof (i.e., more precise vibration information), because such modification is no more than the use of well known expedient for measuring vibrations in the art.

Applicant traversed Rudd and Sugimoto on the grounds that they do not include features of the claimed invention, e.g., loading and measurement of loading. The Examiner disagrees. Either one of Rudd or Sugimoto is applied only as a secondary reference and their teaching on a laser vibrometer is used to modify the primary reference, Takumoto et al. As such, Rudd or Sugimoto does not have to disclose all of the elements of the claims. If Rudd or Sugimoto had all the elements cited by the Applicant in the traverse, then there would be no need to apply them as a secondary

references because each would qualify as a stand-alone reference that fully anticipates the claims.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rick Palabrica whose telephone number is 703-306-5756. The examiner can normally be reached on 6:30-5:00, Mon-Thurs..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Carone can be reached on 703-306-4198. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RJP
January 4, 2004

MICHAEL J. CHIUNE
SUPERVISORY PATENT EXAMINER